200200139

# HHE UNITHED STAYLES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Spagenta Seeds, Inc.

PIPERS, THERE HAS BEEN PRESENTED TO THE

# Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT. VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT, VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITIORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN CING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY NION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'S25-D3'

In Testimon Merrers, I have hereunto set my hand and caused the seal of the Mant Marieto Protestion Office to be affixed at the City of Washington, D.C. this eighteenth day of July, in secur two thousand three.

Atlest:

gemjac

Commissioner Plant Variety Protection Office Sgricultural Marketing Service Secretary of Agriculture

INSTRUCTIONS 200200139
GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner: (2) completed exhibits A, B, C, E: (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository (4) check-drawn on a U.S. bank for \$2,45 (\$300 filing fee and \$2,150 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Varie Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$300 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

> Plant Variety Protection Office Telephone: (301) 504-5518 FAX: (301) 504-5291

Homepage: http://www.ams.usda.gov/science/pvp.htm

ITEM

18a, Give:

- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method:
- (2) the details of subsequent stages of selection and multiplication;
- (3) evidence of uniformity and stability; and
- (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
  - (1) identify these varieties and state all differences objectively:
  - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
- 19. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
- 22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- 23. See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.
- 22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

23. CONTINUED FROM FRONT (Please give the country, date of filling or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filling a change of address. The fee for filling a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089.

Public reporting burden for this collection of information is estimated to everage 30 minutes per sesponse, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggests. reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number is your lotter. Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Mot all

ded bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braile, large print, audicupe, etc.) should contact the USOA Office of Communications at (202) 720-2791. To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 2020, or call (202) 720-7127 (voice) or (202) 720-1127 (TDO). USDA is an equal opportunity employer.

#### **EXHIBIT A**

# (\$25-D3') 87:4/15/2003 Origin and Breeding History of X125

In the summer of 1994 the Syngenta Seeds, Inc. (formerly Novartis Seeds, Inc. or Northrup King Co.) breeding group at London, Ontario, made the cross, 'Harovinton' x 'S24-12', from which the variety X125 was derived. Harovinton is a public variety developed by Agriculture and Agri-Food Canada at Harrow, Ontario. S24-12 is a commercial variety developed by Syngenta Seeds.

The F1 and F2 generations were grown at the Syngenta Seeds, Inc., Research Center near Kekaha, Kauai, HI, in the winter of 1994-95. The F3 generation was grown at London in the summer of 1995; the F4 and F5 in Kekaha in the winter of 1995-96, and the F6 at London, in the summer of 1996. The F2 through F5 generations were advanced using a modified system of single seed descent. Single F6 plants were harvested in the fall of 1996 and threshed individually. The progeny from these plants were yield tested in progeny rows in the summer of 1997. One of these, designated CL970321, was chosen on the basis of agronomic appearance for preliminary testing and initial increase. CL970321 was tested in extensive replicated trials in Ontario, Quebec, and the northern United States from 1998 through 2001, and found to perform well compared to other large seeded, food grade type Maturity Group II varieties. It was tested in the greenhouse at the Syngenta Seeds, Inc. Research Center at Bay, AR, for resistance to *Phytophthora sojae* and found to have the Rps1-c gene for resistance. It was tested at several field locations in Iowa and Minnesota for iron deficiency chlorosis and found to have intermediate tolerance. It was also found to have purple flowers, gray pubescence, tan pod walls, and seed with yellow seed coats and yellow hila (may contain up to 2% other hilum color). In 2001 it was tested under the experimental designation X125.

In the summer of 1998 the seed from the initial increase produced in 1997 was planted to produce Breeder Seed. This increase was rogued for flower, pubescence color, pod color, and other visually observable traits. Further increases were made in 1999 and 2000 in Ontario. This seed was further increased at Homestead, FL in the early spring of 2001.

Foundation seed of X125 was produced by Syngenta Seeds, Inc. in the summer of 2001. The increase was found to meet Syngenta Seeds, Inc. standards for Foundation Seed.

X125 is uniform and stable within a purity level of 99% (98% for hilum color and pod color). During the four years of testing and three years of seed increase, we have observed a small number, less than 2%, of plants with brown pod color. Any other variant plants removed from increase fields were assumed to have arisen from admixture or out-crossing. Varietal purity will be maintained using progeny rows as needed for the life of the variety.

#### **Exhibit B**

## Statement of Distinctness for the Variety X125

Soybean variety X125 is most like the varieties S24-12 and Harovinton. It can be differentiated from S24-12 on the basis of pod color. X125 has tan pods; S24-12 has brown pods. It can be differentiated from Harovinton on the basis of maturity and protein content. X125 is later, has smaller seed size, and has lower protein percent than Harovinton. Supporting data are given below.

#### Days to Maturity of X125 vs. Harovinton, Ontario Food Grade Trials

	Variety	2000	2001	2001 Malden	2001 Chatham	2001
81:4/15/2	525-D3	Summary	Summary			Woodslee
	≁X125≯	119.2	113	108	114	117
	Harovinton	116.3	107	102	109	111
	LSD	1.3	1	2	3	3

# Seed Size (g/100) of X125 vs. Harovinton, Ontario Food Grade Trials

	Variety	2000	2001	2001 Malden	2001 Chatham	2001
B1:4   5 200	`S25-D3'	Summary	Summary			Woodslee
Dr. des	≺X125 <b>&gt;</b>	22.8	20.7	21.3	20.7	20.0
	Harovinton	24.8	22.1	23.3	21.2	21.7
	LSD	0.8	0.5	0.7	0.9	1.0

### Protein Percentage of X125 vs. Harovinton, Ontario Food Grade Trials

BT: 4/15/200	Variety '525-03'	2000 Summary	2001 Summary	2001 Malden	2001 Chatham	2001 Woodslee
•	<x125≻< td=""><td>45.0</td><td>42.2</td><td>42.7</td><td>42.1</td><td>41.9</td></x125≻<>	45.0	42.2	42.7	42.1	41.9
[	Harovinton	47.5	45.4	46.4	45.6	44.2
	LSD	0.5	0.4	0.4	0.6	0.8

(DT: 4/25/02) Per applicant's verification, all statistics recorded above were tested at the 95% probability level.

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Parm Appraved - OMB Na. 0541-0055

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information,

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activides on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille , large print, audiouspe, etc.) should contact the USDA's TARGET Center at 207-770-2600 (voice and TDO).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W. Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer

> U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY PLANT VARIETY PROTECTION OFFICE BELTSVILLE, MD 20705

EXHIBIT C (Soybean)

OBJECTIVE DESCRIPTION OF VARIETY SOYBEAN (Glycine max (L.) Merr.)

NAME OF APPLICANT(5)	FOR OFFICIAL USE ONLY
Syngenta Seeds, Inc. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)	200200139
510 N. 12th Ave.	VARIETY NAME
P.O. Box 949	'S25-D3'(81:4/15/2003)
Washington, Iowa 52353	TOTAL OF EACH CONTENT OF
	DESIGNATION X125
DI CACE DEAD ALL INSTRUCTIONS CAREFULL V. Blace the appropriate and the state of	
PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the vari	etal character of this variety in the boxes
9 9 9 0 0 9	
Place a zero in the first box (e.g. ) when number is either 99 or less of quantitative	r y or less respectively. Data for
plant characters should be based on a minimum of 100 plants. Comparative data should be determined from	
Horticultural Society or any recognized color standard may be used to determine plant colors; designate syste	em used;
Please answer all questions for your variety; lack of response may delay progress of your application.	
A. MORPHOLOGY	
Seed Shape:	
1 = Spherical 2 = Spherical-Flattened (L/W, L/T, and T/W ratios < 1.2) (L/W ratio > 1.2; L/T ratio <	< 1.2)
3 = Elongate 4 = Elongate-Flattened	
(L/T ratio $> 1.2$ ; T/W ratio $< 1.2$ ) (L/T ratio $> 1.2$ ; T/W ratio $>$	1.2)
Seed Coat Color:	
$1 = Yellow \qquad 2 = Green \qquad 3 = Brown \qquad 4 = Black$	5 = Other
	(Please Specify)
Seed Coat Luster:	
$\begin{bmatrix} 1 & 1 & \text{Dull} & 2 & \text{Shiny} \end{bmatrix}$	
$\begin{bmatrix} 1 \\ \end{bmatrix}$ 1 = Dun 2 - Samy	
Seed Size:	
2 2 grams/100 seeds	
E Grand, 100 documents	
Hilum Color:	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	5 = Imperfect Black
6 = Black 7 = Other (Please Specify)	

Cotyledon Color:

1 = Yellow 2 = Green 200200139

Seed Protein Peroxidase Activity:

1 = Low2 = High

Hypocotyl Color:

1 = Green

2 = Green with Bronze ('Evans' or 'Davis') Bands below Cotyledons ('Woodworth' or 'Tracy')

3 = Light Purple below Cotyledons ('Beeson' or 'Pickett 71')

4 = Dark Purple extending to unifoliolate leaves ('Hodgson', 'Coker', or 'Hampton 266A')

Leaflet Shape:

1 = Lanceolate

2 = Oval

3 = Ovate

4 = Other (Please Specify)

Flower Color:

1 = White

2 = Purple

3 = White with a Purple Throat

Pod Color:

1 = Tan

2 = Brown

3 = Black

Pubescence Color:

1 1 = Gray

2 = Brown (Tawny)

3 = Light Tawny

Plant Habit:

1 = Determinate

2 = Semi - Determinate

3 = Indeterminate

4 = Intermediate

Maturity Group:

1 = 0006 = III

2 = 00

3 = 08 = V

4 = I9 = VI  $\tilde{\mathfrak{z}}=\mathfrak{U}$ 10 = VII

11 = YIII

7 = IV12 = IX

13 = X

14 = XI

15 = XII

Maturity Subgroup:

Please enter a value from 0 - 9

B. DISEASE REACTIONS

0 = Not Tested

1 = Susceptible

2 = Resistant

3 = Tolerant

Bacterial

Bacterial Pustule (Xanthomonas campestris pv. glycines (Nakano) Dye)

Bacterial Blight (Pseudomonas syringae pv. glycinea (Coerper) Young, Dye, & Wilkie)

Wildfire Blight (Pseudomonas syringae pv. tabaci (Wolf & Foster) Young, Dye, & Wilkie)

	/02 MON 20:49 FAX 301 504 5291 USDA AMS PVPO ISEASE REACTIONS (Continued) 0 = Not Tested 1 = Susceptible	2 = Resistant 3 = Tolerant	[ <u>@]</u> (
0	Cowpea Mosaic (Cowpea Chlorotic Virus)		
0	Pod Mottle (Bean Pod Mottle Virus)	200200139	
0	Seed Mottle (Soybean Mosaic Virus)	The second secon	
Nemat	ode		
Soybea	an Cyst Nematode (Heterodera glycines Ichinohe)		
	race 1 race 4 race 9		
	race 2 race 5 1 race 14		
1	race 3		
0	Lance Nematode (Hoplolaimus columbus Sher)		
0	Southern Root Knot Nematode (Meloidogyne incognita (Kofoid & White) Chity	wood)	
0	Northern Root Knot Nematode (Meloidogyne hapla Chitwood)		
0	Peanut Root Knot Nematode (Meloidogyne arenaria (Neal) Chitwood)		
0	Reniform Nematode (Rotylenchus reniformus Linwood & Olivera)		
0	Javanese Nematode (Meloidogyne javanica (Treub) Chitwood)		
	Other Nematode (Please Specify)		
C. PH	YSIOLOGICAL RESPONSES 0 = Not Tested 1 = Susceptible	2 = Resistant 3 = Tolerant	•••
	Iron Chlorosis on Calcareous Soil Intermediate		
0	Phosphorus Other (Please Specify)		
0	Boron		
0	Aluminum		٠
0	Salt		
هٔ	Drought		

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O Mexican Bean Beetle (Epilachna varivestis Mulsant)  O Potato Leaf Hopper (Empoasca fabae (Harris))  Other (Please Specify)	usceptible 2 = Resistant 3 = Tolerant usceptible 2 = Resistant
Mexican Bean Beetle (Epilachna varivestis Mulsant)  O Potato Leaf Hopper (Empoasca fabae (Harris))  Other (Please Specify)  HERBICIDE REACTIONS 0 = Not Tested 1 = Su  2 Metribuzin	
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O Bentazone	
O Bentazone	
1 Sulfonylurea	
1 Glyphosate	
- Gryphosic	
O Glufosinate	
O Pendimethalin	
Other (Please Specify)Sulfentrazone	
Omer (1 least opens))	
TRANSGENIC COMPOSITION	
the development of the subject variety included the insertion of genetic	ic material from an organism other than a soybe
the removal of genetic material from the application variety?	
es, please complete the following information requests*. Use additiona	al pages if necessary. YES X NO
Please state the vector's name:	
Disease state the western companyoner	
Please state the vector components:	
Please describe the genetic material successfully transferred into the su	object variety
Please describe the insertion protocol:	
A literature citation(s) explaining the four information requests above	may be an acceptable alternative to completion
the "Transgenic Composition" portion of this form.	
the control of the co	
BIOCHEMICAL MARKERS	and the second of the second o
	halneni in engelon dagaribin the subject and
BIOCHEMICAL MARKERS  se describe any biochemical information here, which you believe will be Simple Sequence Repeats, Restriction Fragment Length Polymorphism	

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H. COMMENTS

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- If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which sifords similar protection to nationals of the U.S. for the same
- 3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid CMB control number. The valid CMB control number per that information collection is of the information of the required to complete this information is estimated to average 0.1 near per response, including the time for reviewing the matriculars, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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ST-470-E (07-01) Designed by the Plant Variety Protection Office using Word 2000, Roplaces ST-470-E (04-99), which is obsolete.